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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,876	12/02/2003	Yukio Kadowaki	6453P017	5417

7590 08/27/2007

Michael J. Mallie
Blakely, Sokoloff, Taylor & Zafman LLP
1279 Oakmead Parkway
Sunnyvale, CA 94085

EXAMINER	
GE, YUZHEN	

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
08/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/726,876	KADOWAKI ET AL.	
	Examiner	Art Unit	
	Yuzhen Ge	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 02 December 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 recites the limitation "the decoding code" and the "the calculating code". There is insufficient antecedent basis for this limitation in the claim. The examiner will interpret "the decoding code" and "the calculating code" as the computer instructions that are used for decoding and calculating respectively.

Claim Rejections - 35 USC § 101

3. Claims 6-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 6 and 7 define an article of manufacture having one or more recordable media embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed recordable media can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to

embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Currently in TC 2600, it is required explicitly to include "computer-readable medium", "encoded" (or "storing", "embodied with a", "encoded with a", "having a stored", "having an encoded"), and "computer program" in the claim language to make it explicitly a statutory subject matter.

Claim Rejections - 35 USC § 103

4. Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JPEG 2000 Image coding system Part 1 (Annex D.5, J.7 and J.14, ISO/IEC 15444-1, 1st Edition, 2000-12-15, hereafter referred to as 15444-1) in view of Watkins (US Patent 6,337,710 B1).

Regarding claim 1, 15444-1 teaches an image processing apparatus, comprising:

a reading unit to read distortion amount information showing how much a decoded image is degraded from an original image when data are eliminated from a data sequence, the distortion amount information being included in a code sequence in which the original image is compressed and encoded in accordance with a method capable of progressively displaying the image (Pages 213-215, Annex J.14, the distortion amount information D_i^n are embedded in the bit stream);

an error detecting unit to detect an occurrence of an error in each unit of the code sequence (Annex D.5, page 106, Annex J.7, the unit that detects the error or read the error is regarded as the error detecting unit);

a distortion amount calculating unit to calculate a distortion amount of the decoded image against the original image when the code sequence is decoded after the data are eliminated from the code sequence by using the distortion amount information concerning the data in which the data is discarded (Pages 217, Annex J.14.4.1, D_i^0 denotes the distortion incurred by skipping the code-block altogether).

15444-1 also teaches minimizing distortion while subject to a rate constraint (Annex J.14.3, Pages 215-216) and distortion evaluations when a code block is discarded (Annex 14.4).

However 15444-1 does not explicitly teaches a comparing unit to compare the distortion amount calculated by distortion amount calculating unit with a threshold.

In the same field of endeavor, Watkins teaches calculating distortion and comparing to a threshold (Fig. 5, col. 5, lines 5-27, measurement of image quality is regarded as distortion). It is desirable to achieve an acceptable picture quality through compression and decompression and it is desirable to enable feedback of the system to the user in case of errors (col. 1, lines 23-45). Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to use the method of Watkins to compare distortion with a threshold so that a certain picture quality can be assured.

Regarding claim 3, 15444-1 and Watkins teach the image processing apparatus as claimed in claim 1. 15444-1 further teach wherein JPEG 2000 or Motion JPEG 2000 is applied to the method and the each unit of the code sequence is one packet as a unit in that the occurrence of the error is detected and the distortion information is used (Annex J.14, Pages 214-215).

Regarding claim 4, 15444-1 and Watkins teach the image processing apparatus as claimed in claim 1. 15444-1 further teach wherein the distortion calculating unit calculates a total distortion amount of the decoded image against the original image by accumulating the distortion amount of the each unit of the code sequence (Annex J.14, Pages 214-215).

Regarding claim 5, 15444-1 and Watkins teach the image processing apparatus as claimed in claim 1. Watkins further teaches an informing unit to inform a user that the error occurred to the image, when the distortion amount is more than the threshold (col. 5, lines 2-27, Figs. 5-6D). Well-known software such as Adobe Photoshop also informed users in case of errors. It is desirable to let user be in control and provide user with flexibility of using the apparatus during decoding and encoding. Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to use the method of Watkins to inform a user that an error has occurred so that the user can react to the error.

Claims 6-7 are the corresponding article of manufacture claims of claim 1. 15444-1 teaches an article of manufacture (inherent from that JPEG 2000 is computer-implemented method, also for example, Adobe Photoshop). Also Watkins teaches an article of manufacture (col. 3, lines 1-9). Thus 15444-1 and Watkins teach claims 6-7 as evidently explained in the above-cited passages.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over JPEG 2000 Image coding system Part 1 (Annex D.5, J.7 and J.14, ISO/IEC 15444-1, 1st Edition, 2000-12-15,

hereafter referred to as 15444-1) in view of Watkins et al (US Patent 6,337,710 B1), further in view of Kimura et al (US Patent 6,756,921).

Regarding claim 2, 15444-1 and Watkins et al teach the image processing apparatus as claimed in claim 1. 15444-1 further teaches the apparatus comprising:

a decoding unit to decode the code sequence (Page 11, Annex J.14).

Watkins teaches

an outputting unit to output image data being decoded when the distortion amount is less than the threshold as a result of the comparing unit (col. 5, lines 2-27, the display halts only when error is detected).

However they do not explicitly teach

a canceling unit to cancel the decoding unit to decode the code sequence so as not to output the image data being decoded.

In the same field of endeavor, Kimura et al teach a canceling unit to cancel the decoding unit to decode the code sequence so as not to output the image data being decoded (col. 36, lines 44-55). It is desirable to be efficient when decoding. Not decoding the code sequence that does not satisfy the distortion criterion will save time and resource and only those code sequences that satisfy the quality requirement are decoded and outputted. Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to cancel the decoding of the code sequence so as not to output the image data being decoded so that time and resources can be better utilized.

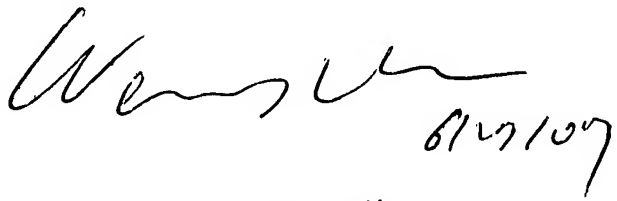
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuzhen Ge whose telephone number is 571-272 7636. The examiner can normally be reached on 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Yuzhen Ge
Examiner
Art Unit 2624



WENPENG CHEN
PRIMARY EXAMINER